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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,848	07/31/2003	Yukiko Iwasaki	240301US2	1984

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EXAMINER

GLEITZ, RYAN M

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/630,848

Applicant(s)

IWASAKI ET AL.

Examiner

Ryan Gleitz

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,9,11-13,15,17 and 24 is/are rejected.
- 7) ☒ Claim(s) 2,6,8,10,14,16,18-23 and 25-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/29/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 10 (Fig. 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 20 and 21 are objected to because they are duplicate claims.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2852

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-5, 7, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (JP 10-198129) in view of Kisu (JP 3-240076).

Fujino discloses an image forming apparatus comprising: a charger (2) that charges a body (1) with a voltage in which an AC voltage is superimposed on an DC voltage (abstract, line 9); and a humidity detecting unit (4) that detects a humidity in a space between the charger (2) and the body (1). According to humidity data received from the humidity sensor (4), the high voltage controller (5) controls the AC (abstract, lines 15-19). This reads on a correcting unit that decides a magnitude of the AC voltage to be superimposed on the DC voltage based on the humidity.

Regarding claim 3, the AC voltage is controlled in three stages, less than 25% humidity, 25% to 75% humidity, and more than 75% humidity ([0071]-[0073]). This reads on the control unit varies the magnitude of the AC voltage if a change in the humidity exceeds a predetermined value.

Regarding claim 4, figure 1 shows that the control unit (5) varies the magnitude of the AC voltage after elapsing of prescribed time upon a power supply to the control unit is turned ON.

Regarding claim 5, the AC magnitude control is performed for every count of a cycle of the electrification process, which is once for each image forming cycle ([0032]). This reads on the control unit varies the magnitude of the AC voltage upon passage of a one paper, which is a prescribed number of papers.

Regarding claim 7, the charger (3) is a roller that includes a resistive layer ([0008]), which is a material having a medium electric resistance.

Regarding claims 17, the image forming apparatus above also reads on a method of forming an image.

Fujino does not disclose that the charger is not in contact with the body.

However, Kisu discloses an electrostatic charging device wherein the charging member is in a non-contact state with the body (abstract, line 7) to prevent the trace of the charging member and charging noise (abstract, lines 10-12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the charger of Fujino with the gap taught by Kisu to prevent the trace of the charging roller and charging noise from occurring (abstract, lines 1-4).

Claims 9, 11-13, 15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino (JP 10-198129) in view of Kisu (JP 3-240076) as applied to claims 1, 3-5, 7, and 17 above, and further in view of Endo (JP 05-181350).

Fujino and Kisu disclose the image forming apparatus above including a humidity detecting unit but do not disclose a temperature detecting unit.

However, Endo disclose an environment detecting means (19) including both temperature and humidity detecting units (abstract, lines 8-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the detecting unit of Fujino to include both temperature and humidity detecting units as taught by Endo to obtain a more complete picture of the internal environment. Further, the fluctuation of the impedance of the charging means is influenced by both the temperature and the humidity (abstract, lines 12-15).

#### ***Allowable Subject Matter***

Claims 2, 6, 8, 10, 14, 16, 18-23, 25-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Other Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kikui et al. (US 5,749,022) disclose a contact type charging member wherein a humidity and temperature are detected and a magnitude of the AC bias is controlled based on the temperature.

Arataira (JP 2001-154462) discloses a contact electrifying member wherein the magnitude of the AC voltage is controlled based on a humidity detection means.

Maehashi (JP 08-123152) discloses a contact electrifying member wherein the current value is controlled by the result of a temperature and humidity detecting means.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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